# UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/736,589 | 12/17/2003 | Wataru Ito | 500.43348X00 | 5718 |

24956           7590           10/19/2007
MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.
1800 DIAGONAL ROAD
SUITE 370
ALEXANDRIA, VA 22314

| EXAMINER |
|---|
| RAO, ANAND SHASHIKANT |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2621 | |

| MAIL DATE | DELIVERY MODE |
|---|---|
| 10/19/2007 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| | Application No. | Applicant(s) |
|---|---|---|
| **Office Action Summary** | 10/736,589 | ITO ET AL. |
| | Examiner | Art Unit | |
| | Andy S. Rao | 2621 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) ☒ Responsive to communication(s) filed on *28 September 2007*.

2a) ☐ This action is **FINAL**.     2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) ☒ Claim(s) *22-29* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *22-29* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some *  c)☐ None of:

      1. ☒ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

## DETAILED ACTION

### *Response to Amendment*

1.     Applicant's arguments with respect to claims 22-29 as filed on 9/28/07 have been

considered but are moot in view of the new ground(s) of rejection, based on previously uncited

portions of Martin's reference.

### *Claim Rejections - 35 USC § 102*

2.     The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999

(AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002

do not apply when the reference is a U.S. patent resulting directly or indirectly from an

international application filed before November 29, 2000. Therefore, the prior art date of the

reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA

35 U.S.C. 102(e)).

3.     Claims 22-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Martins.

Martins discloses an object tracking method for detecting and tracking an object in a

picked-up image based on an image signal acquired by an imaging unit (Martins: figures 4, 6-9),

comprising the steps of: a) producing a template image cut out from the (Martin: column 6, lines

25-35: "segmentation templates") the image acquired from said imaging unit (Martins: column 5,

lines 60-65) so as to include a part of said object (Martin: column 6, lines 55-65); b) conducting

a template matching by calculating correlations (Martins: column 8, lines 1-15) between a

present image from said imaging unit and said template image, detecting a position of a part of

said present image matched with said template image as a current template image (Martins:

column 7, lines 1-15), and updating by said detected position (Martins; column 7, lines 35-50); c)

detecting an image changing area between at least two frames of images picked up at different

time points by said imaging unit (Martins: column 6, lines 40-50); and d) detecting and updating

a position of said object based on said detected image changing area (Martins: column 6, lines

60-65: as it applies to the generated "segmentation template"), and updating a template image by

an image output as a new bitstream image based on the updated position of said object (Martins:

column 5, lines 1-15), as in claim 22.

Regarding claim 23, Martins discloses wherein said step d) includes a sub-step of

detecting, based on said detected image changing area, an area having a greatest difference or a

difference equal to or larger than a predetermined value between the said two frames as said

position of said object (Martins: column 6, lines 15-25), as in the claim.

Regarding claims 24-25, Martins discloses wherein said step d) includes a sub-step of

setting a search area for detecting within an area expanded (Martins: column 6, lines 1-5:

"clipping"), predetermined pixels from the current template (Martins: column 6, lines 30-40), a

position of area having a greatest difference or a difference equal to or larger than a

predetermined value between that said two frames as said position of said object (Martins:

column 7, lines 5-20), as in the claims.

Martins discloses an object tracking apparatus for detecting and tracking an object in a

picked-up image based on an image signal acquired by an imaging unit (Martins: figures 1 and

3), comprising: an image input unit which produces a template image cut out from the image

(Martins: column 6, lines 30-40: "segmentation template") acquired from said imaging unit

(Martins: column 3, lines 3-15) so as to include a part of said object (Martins: column 6, lines

55-65); and a processing unit which conducts a template matching by calculating correlations

(Martins: column 8, lines 1-15) between a present image from said image input unit (Martins:

column 3, lines 20-25) and said template image, detects a position of a part of said present image

matched with said template image (Martins: column 7, lines 1-15) and updates position of a

current template by said detected position (Martins: column 7, lines 35-50), wherein said

processing unit further detects an image changing area (Martins: column 5, lines 60-65) between

at least two frames of images picked up at different time points by said imaging unit (Martins:

column 5, lines 25-35); detects and updates a position of said object based on said detected

changing area (Martins: column 5, lines 1-15), and updates a template image an image output as

a new template based on the updated position of said object (Martins: column 6, lines 60-65), as

in claim 26.

Regarding claim 27, Martins discloses wherein said processing unit sets a search area for

detecting the position of said object based on the position of said current template image, and

detects an area having a greatest difference or a difference equal to or larger than a

predetermined value between the said two frames as said position of said object in said set search

area (Martins: column 6, lines 15-25), as in the claim.

Regarding claims 28-29, Martins discloses wherein said processing unit sets a search area

for detecting the position of said object based on the position of said current template image

(Martins: column 6, lines 1-5: "clipping"), and detects an area having a greatest difference or a

difference equal to or larger than a predetermined value between the said two frames as said

position of said object in said set search area (Martins: column 6, lines 20-30), as in the claims.


### *Conclusion*

4.      Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Andy S. Rao whose telephone number is (571)-272-7337. The

examiner can normally be reached on Monday-Friday 8 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Mehrdad Dastouri can be reached on (571)-272-7418. The fax phone number for the

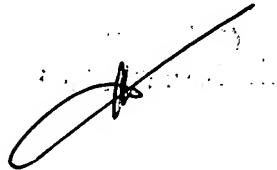organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Andy S. Rao
Primary Examiner
Art Unit 2621

asr
October 15, 2007